5 April 2006

RELEASE NOTES - ORDA BUILD 8.0

This document lists minor RDA problems along with workarounds, solutions, explanations of how some functionality works, and suggestions on how to prevent various problems and situations.

Enhancements and Change Information in ORDA Build 8.0

ORDA Software Build 8.0 provides the following enhancements:

- Redundant Channel Control
  a) Channel switching is enabled.
  b) RMS communication is added
- HCI Updates
  a) Performance/Maintenance Data may be saved to a file.
  b) Restart, State selection, Mode Selection & VCP selection are allowed from EITHER control.
- STS Updates
  a) Log files may be viewed.
  b) Calibration Menu sequence is changed.
  c) Pedestal Control Window dynamically updates uncorrected position information.
- Adaptation Data Merge capability

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1 RDA HCI

1.1 RDA HCI crashes

Problem: Sometimes the RDA HCI will crash in the following scenarios:
(1) RDA HCI at the MSCF or RDA freezes up, thereby not allowing the operator selection of any control commands.
(2) RDA HCI at the RDA closes leaving just the blue background on the monitor.
(3) RDA HCI on the laptop will not open when attempting a connection through the RAS.

In these cases, the system is still functional; that is, still providing base data to the systems. Also, control is still available through the RPG. However, the system is not controllable through the RDA HCI. A correction will be available in Build 9.0.

Workaround: Put the system in Standby. If at the RPG, perform an RDA Restart. This will reboot both machines and bring the HCI back up. Access through the RAS and MSCF should be available after the RDA Restart. If at the RDA, select RDA SW Start from the background menu. If either an RDA Restart from the RPG or RDA SW Start from the RDA do not work, reboot the two computers by pressing the power buttons on both the RDA Control Processor (RCP) and the Signal Processor (RVP).

1.2 Main RDA HCI Window

Problem: Under heavy load, the Main RDA HCI will occasionally start to flicker. For example, in the Status Log Window, if all processes are set to log in "Verbose" mode while the system is in Operate and multiple RDA HCIs are connected, the Main RDA HCI status area will blink repeatedly due to the heavy load.

Workaround: A workaround is to set as many processes as possible to log in Normal mode, close the RDA HCI, and start a new RDA HCI.

1.3 Status and Alarm Log Window Filtering

Note: When searching or filtering on specific parameters in the RDA Status Log or Alarm Log on the RDA HCI, select the Pause Log before filtering. If Pause Log is not selected, new incoming messages will override the filter selection and make it seem as though the search or filter parameter is not working correctly.

1.4 Performance/Maintenance Data - RDA vs. RPG Window

Note: The RDA HCI Performance Data window does not dynamically update. This may be confusing to users familiar with the RPG's RDA Performance Data windows which do update when new Performance Data is received from the RDA. The user must select the 'Update' button on the RDA HCI Performance Data window to update the displayed performance data values.

1.5 RDA HCI and RPG Performance/Maintenance Data Values May Differ Slightly

Problem: Various differences exist between the RDA HCI display and the RPG display of Performance/Maintenance Data (for example, value precision, label names, units of measure labels, etc.)

Workaround: Most differences will be corrected in future builds.

1.6 Transmit Burst Phase and Burst Power Values Never Change

Problem: Values for Transmit Burst Phase and Transmit Burst Power are 0 and never change.

Workaround: These values are not used but will be used in the future.

2 Alarms

2.1 RF/GEN STALO FAIL Alarm

Problem: In some cases, the RF Generator in the Legacy system will not indicate any faults until the ORDA system is installed. If the radar data looks good, but the RF/GEN STALO alarm is being generated, this is an indication of a bad RF Generator.

Workaround: Obtain new RF Generator from NRC with correct capacitor values.

2.2 False MISSING BURST PULSE Alarm

Problem: Data received through the SIGMET software from the Signal Processor occasionally provides a false positive for the MISSING BURST PULSE alarm.

Workaround: Ignore intermittent MISSING BURST PULSE alarms. If the alarms persist through multiple VCPs, verify burst input to the IFD.

2.3 Possible Misinterpretation of COM Alarms by Systems Downstream

Problem: Alarms in the "COM" device category are interpreted as Wideband failures in downstream systems such as AWIPS. The RDA classifies all communication alarms (RAS connect/disconnect, etc…) as "COM" alarms. For example, the new ORDA alarm REMOTE LOGIN THROUGH REMOTE ACCESS SERVER may trigger a false Wideband Failure on AWIPS.

Solution: Technician should note the specific alarm text if a "COM" alarm is detected. In most cases, data is still available at the system downstream and the warning banner can be ignored. This will be corrected in a future AWIPS build.

2.4 False SNMP TIME OUT: POWER ADMINISTRATOR Alarm

Problem: The RDA may occasionally produce false "SNMP TIME OUT: POWER ADMINISTRATOR" alarms. These alarms usually clear within 1 minute. This alarm is identified as a COM alarm. The RPG translates this to a Wideband alarm in the GSM and causes a RED BANNER at the AWIPS indicating RDA data is not available. The AWIPS RED BANNER is not correct and RDA data is available at the AWIPS.

Workaround: Ignore intermittent SNMP TIME OUT: POWER ADMINISTRATOR alarms. If the alarms do not clear within 1 minute, check the Power Administrator to ensure it is operating correctly.

2.5 False SNMP TIME OUT: RDA UPS Alarm

Problem: The RDA may occasionally produce false "SNMP TIME: RDA UPS" alarms. These alarms usually clear within 1 minute. This alarm is identified as a COM alarm. The RPG translates this to a Wideband alarm in the GSM and causes a RED BANNER at the AWIPS indicating RDA data is not available. The AWIPS RED BANNER is not correct and RDA data is available at the AWIPS.

Workaround: Ignore intermittent SNMP TIME OUT: RDA UPS alarms. If the alarms do not clear within 1 minute, check the UPS to ensure it is operating correctly.

2.6 ORDA HCI Alarm Line Goes Blank On Remote HCI

Problem: Remote RDA HCIs do not display the last alarm generated by the system when the remote HCI is started.

Workaround: Click on "Get History" button on the Alarm Log window to get historical alarm information.

2.7 False NTP FAILURE; GPS FAILURE Alarms

Problem: The GPS receiver intermittently fails to detect sufficient satellites for 2-3 seconds causing false NTP FAILURE and GPS FAILURE alarms. Both alarms happen concurrently in this case.

Workaround: Ignore intermittent GPS FAILURE and NTP FAILURE alarms. If alarms persist for more than 30 minutes, reboot the GPS system and follow the troubleshooting procedures found in EHB 6-515.

2.8 DYNAMIC RANGE DEGRADED Alarm

Problem: The system may periodically indicate false DYNAMIC RANGE DEGRADED alarms.

Workaround: If the alarm is not accompanied by a LINEARITY DEGRADED alarm, then the alarm is probably a false alarm. If the alarm is accompanied by the LINEARITY DEGRADED alarm and persists, then verify failure by executing Linearity from the Calibration menu in STS. If Linearity executes with valid Dynamic Range, I naught, and dBZ0 values, then the alarm is a false alarm. Otherwise, troubleshoot hardware failure.

3 System Test Software (STS)

3.1 Using RDA System Test Software (Off-Line Test)

Note: It is no longer necessary to stop the RDA software to use Off-Line System Test functionality. The former RDASOT no longer exists. Off-Line System Test functionality is available from the RDA HCI button "System Test Software". When this button is selected and confirmed by the technician, the RDA software logically disconnects the RPG and prepares the RDA to run in an Off-Line Maintenance mode. When the RDA System Test Software Window is exited, the RDA software logically reconnects the RPG and restores operational status without the operator having to command RDA software start.

3.2 Remote Access Server (RAS) Configuration Fails When Default Password Is Not Used.

Problem: When trying to configure the RAS, it fails when the OS level operator account password used is not the default. This will be resolved in Build 9 by changing the Hardware Configuration utility to prompt the user for the password instead of assuming the default password.

Solution: Use the default OS level operator account password, then configure the RAS. After the RAS configuration is completed, change the OS level operator account password to a site-specific password. The default password may be obtained by calling the WSR-88D Hotline at (800) 643-3363.

3.3 Power Administrator Configuration Fails When Default Password Is Not Used.

Problem: The Power Administrator configuration will fail when the RAS operator account password is not set to the default password. This will be resolved in Build 9 by changing the Hardware Configuration utility to prompt the user for the password instead of assuming the default password.

Workaround: Before configuring the Power Administrator, make certain that the RAS operator account has been set to the default password. The default password may be obtained by calling the WSR-88D Hotline at (800) 643-3363.

4 Backup and Restore Utility

4.1 Size of Archived Log Files Can Become Too Large

Problem: When the system has been running for an extended period of time, it is possible that the size of the archived log files will become too large to fit on a standard CD-RW (holds approximately 700 MB). There is no indication to the operator that they should use a DVD (holds approximately 4.7 GB) for larger Archive or Backup operation.

Workaround: The size of the files which will be included in the Archive or Backup is displayed on the Backup/Restore HCI when the Archive or Backup tab is selected. The operator should look at the displayed size to determine if a DVD-R is required for the operation before continuing.

4.2 Backup/Restore Utility May Hang

Problem: In rare instances, the backup/restore utility will not restore files from a CD. The software will hang.

Workaround: Close the HCI & restart the application software.

5 Hardware

5.1 Channel 2 Takes Control From Channel 1 Without Being Commanded.

Problem: During installs of channel 2, channel 2 will take control from channel 1. (This can also happen if channel 2 rcp8 is rebooted using its red power button, or if reboot, or shutdown of the rcp8/rvp8 is selected from right clicking in the blue background screen of the rcp8.)

Work Around: To avoid these problems, the channel 2 DAU has to be powered off until the inter processor link is established between the two channels. For installation, use the following procedure:

1. Turn off the channel 2 DAU, by turning off the DAU power switch (90/190A2 S4) on the Maintenance Panel.

2. Perform normal installation procedures.

3. Once Channel 2 comes up, it will see that channel 1 is the controlling channel, and will not take control from channel 1. (channel 2 will also come up inoperable due to no DAU communications.)

4. When Channel 2 /Channel 1 link goes green on local HCI, turn on the channel 2 DAU power switch that was turned off in step 1.

5.2 ORDA Post Charge Regulator Alignment Problems

Problem: Some sites which have been upgraded to ORDA have reported Post Charge Regulator (PCR) alignment problems when using the EHB 6-511 Transmitter Manual (15 November 2005). After investigation, it was determined that (1) the ORDA Build 7.0 software would not allow the PCR to be properly aligned and (2) an error in the PCR alignment procedure existed.

Workaround: First, ORDA Build 8.0, which includes the necessary software corrections, must be installed. Second, EHB 6-511 requires a minor (pen/ink) correction in step 24 of paragraph 5.5.7.2 consisting of changing "PRF 9" to "PRF 1". A successful PCR alignment can now be performed using the combination of ORDA Build 8.0 and the modified EHB 6-511, paragraph 5.5.7.2. EHB 6-511 Change 1 which is scheduled for release late June 2006 will include the paragraph 5.5.7.2, step 24 change.

5.3 DCU/Pedestal Communications

Problem: Rare occurrences of PEDESTAL BIT RESPONSE alarm and MULTIPLE PED COMM ERROR - RDA FORCED TO STANDBY alarm indicate DCU/Pedestal communication problem.

Workaround: Either recycle power to the Pedestal Electronics from the Maintenance Panel or reset the DCU communications by entering STS and selecting Reset DCU from the Control menu.

5.4 RCP/RVP – Possible Keyboard Controller Problem

Problem: In the unlikely event that the message "**pc_keyb: controller jammed (0x1D)**" occurs on boot for the RCP and RVP, then keys that are subsequently pressed on the keyboard can be received as the wrong input.

Workaround: Disable the USB support in BIOS using the following commands:

1. Reboot the System:
2. Press the **<del>** when the screen says to **enter BIOS select 'del'**.
3. Use the **<right arrow>** key to highlight **Advanced** tab.
4. Use the **<down arrow>** key to highlight **PCI/PnP Configuration** tab.
5. Select:
   <Enter>
6. Verify **PCI/PnP Configuration** is disabled.
   If not, use **<Page Up>** or **<Page Down>** to change.

7. Press **<F10>** and verify **YES** is highlighted to save and exit.

8. Exit BIOS by entering:
   <Enter>

5.5 WIC Card Seating Problems

Problem: The WIC cards obtained from NLSC that are installed in the routers as part of Mod Note 79, Part 1 are more difficult to seat than previous versions.

Solution: It may take two or three attempts to get the WIC cards to seat properly. Also, if you attempt to over-tighten the retaining screws to get them to seat properly, it is possible to separate the head from the shaft on the screw. In theory this makes the module "defective", but another screw can be substituted in these cases.

6 Operator Accounts Must Be Recreated From Build 7.0 to 8.0

Problem: When upgrading from ORDA Build 7.0 to Build 8.0, all operator accounts must be re-created after Build 8.0 installation.

Workaround: Record existing account information before Build 8.0 installation. Recreate all accounts after installation.

NOTE: The Backup CD can be used to restore adaptation data and configuration files but not operator accounts.

7 Data Quality

7.1 Batch Cuts – Ring at Unfolding Boundary in Reflectivity

Problem: In batch cut Reflectivity products, there is a narrow ring of slightly reduced reflectivity values at the range corresponding to the first trip PRF boundary. Velocity and Spectrum Width products will show no data within the small ring at this same range.

Workaround: Reductions in reflectivity values are very small. There is no indication that any algorithm products, including Vertically Integrated Liquid, Storm Total Precipitation, or Composite Reflectivity products, are affected.

7.2 Clutter Region GUI (MSCF HCI) Does Not Always Display Lowest Elevation Background Product

Problem: When switching from Segment 1 to 2 (and back to 1) or when switching from one background product to another, the lowest elevation product is sometimes replaced by 2nd or 3rd tilt product.

Workaround: Call up the R product in the display right after the radar completes the 0.5 cut. Then make your edits, but do not change segments or background products until you are finished.

7.3 Clutter Map Generation

Problem: The clutter map generation utility in Build 7.0 was off by 1km. The map was 1km concentrically closer than actual targets; therefore, when applied, a small fringe of clutter was evident on the radar image.

Workaround: Create a new clutter map for Build 8.0. For guidance on generating Clutter Maps, go to the ROC Internet home page, select "Hotline", "Open RDA", and "Bypass Map For ORDA." The information included in this web page is extremely important and is vital to ensure a suitable Clutter Map is generated.